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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/778,908 | 02/08/2001 | Hideya Takeo | Q61223 | 5842 |
| 7590 | 12/27/2004 | | EXAMINER | |
| SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3202 | | | DO, ANH HONG | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2624 | |

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/778,908 | TAKEO, HIDEYA | |
| | Examiner | Art Unit | |
| | ANH H DO | 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 July 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/23/2004 have been fully considered but they are not persuasive.

* In response to the Applicant's argument that "the cited excerpt does not disclose performing a coefficient transformation process, which corresponds to a desired image processing, on the decoded transformed signals to obtain processed transformed signals which carry the processed image subjected to the desired image processing", it should be noted Castelli clearly teaches inverse wavelet transforming on the decoded transformed signals to obtain processed transformed signals which carry the processed image subjected to the desired image processing (see col. 10, lines 40-48). The Applicant further contends that "Castelli does not teach or suggest the feature of performing a coding process on multiresolution transformed signals to obtain coded data". In contrast, Castelli does perform coding on transformed subbands (Fig. 2, step 210), which can represent the multiresolution signals transformed by DWT in step 202 (Fig. 2). It is also clearly shown in Fig. 3 that 7 subbands are in 2 levels (i.e., multiresolution). Thus, the cited reference fully discloses the limitations in claims 2, 4, and 8.

* With respect to claim 6, the Applicant alleges that "Castelli does not disclose the claimed coefficient transformation means of claim 6". It should be noted that Castelli clearly teaches inverse wavelet transforming on the decoded transformed signals to

obtain processed transformed signals (see col. 10, lines 40-48). Thus, the limitations of claims 6, and of similar claims 1, 3, 5, and 7, are fully disclosed in the cited reference.

For the foregoing reasons, it is believed that the rejection should be sustained.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Castelli et al. (U.S. Patent No. 6,141,445).

Regarding claim 1, Castelli discloses:

- performing a multiresolution transformation process on an image signal to obtain multiresolution transformed signals (step 202, Fig. 2 and col. 4, lines 34-37);
- performing a coefficient transformation process, which corresponds to a desired

image processing, on said multiresolution transformed signals to obtain processed transformed signals which carry a processed image subjected to said desired image processing (col. 4, lines 37-45, teaches the transformation is performed a number of times depending on the number levels of multiresolution desired);

- performing coding process on said processed transformed signals to obtain processed coded data which carries said processed image (Fig. 2: step 210 and col. 10, lines 40-48, teach performing of coding on transformed subbands (Fig. 2, step 210), which can represent the multiresolution signals transformed by DWT in step 202 (Fig. 2); it is also clearly shown in Fig. 3 that 7 subbands are in 2 levels (i.e., multiresolution));

- decoding said processed coded data and further performing an inverse multiresolution transformation process, to obtain a processed image signal which carries said processed image (col. 10, lines 40-44).

Regarding claim 2, Castelli discloses:

- performing a multiresolution transformation process on an image signal to obtain multiresolution transformed signals (col. 4, lines 34-37);

- performing coding process on said multiresolution transformed signals to obtain coded data (Fig. 2: step 210);

- decoding said coded data to obtain decoded transformed signals (col. 10, lines 40-44);

- performing a coefficient transformation process, which corresponds to a desired image processing, on said decoded transformed signals to obtain processed transformed signals which carry a processed image subjected to said desired image

processing (col. 10, lines 40-48, teaches inverse wavelet transforming on the decoded transformed signals to obtain processed transformed signals which carry the processed image subjected to the desired image processing);

- performing an inverse multiresolution transformation process on said processed transformed signals to obtain a processed image signal which carries said processed image (col. 10, lines 40-48).

Regarding claim 3, since this claim is an apparatus claim corresponding to method claim 1, the discussion of claim 1 applies hereto.

Regarding claim 4, since this claim is an apparatus claim corresponding to method claim 2, the discussion of claim 2 applies hereto.

Regarding claim 5, Castelli discloses:

- multiresolution transformation means for performing a multiresolution transformation process on an image signal to obtain multiresolution transformed signals (step 202, Fig. 2 and col. 4, lines 34-37);

- coefficient transformation means for performing a coefficient transformation process, which corresponds to a desired image processing, on said multiresolution transformed signals to obtain processed transformed signals which carry a processed image subjected to said desired image processing (col. 4, lines 37-45, teaches the transformation is performed a number of times depending on the number levels of multiresolution desired);

- coding means for performing coding process on said processed transformed

signals to obtain processed coded data which carries said processed image (Fig. 2: step 210).

Regarding claim 6, Castelli discloses:

- decoding means for decoding said coded data to obtain decoded transformed signals (col. 10, lines 40-44);
- coefficient transformation means for performing a coefficient transformation process, which corresponds to a desired image processing, on said decoded transformed signals to obtain processed transformed signals which carry a processed image subjected to said desired image processing (col. 10, lines 40-48, teaches inverse wavelet transforming on the decoded transformed signals to obtain processed transformed signals which carry the processed image subjected to the desired image processing);
- inverse multiresolution transformation means for performing an inverse multiresolution transformation process on said processed transformed signals to obtain a processed image signal which carries said processed image (col. 10, lines 40-48).

Regarding claims 7 and 19, Castelli discloses a computer readable storage medium recording a program for performing the steps in claim 1 (col. 3, lines 53-57).

Regarding claims 8 and 20, Castelli discloses a computer readable storage medium recording a program for performing the steps in claim 2 (col. 3, lines 53-57).

Regarding claims 9 and 12, Castelli teaches the processed coded data is selectively inputted from a storage system 736 (Fig. 7C).

Regarding claim 10, Castelli teaches search unit 738 serving as a switch for selectively inputting said processed coded data from a storage device 736 (Fig. 7C).

Regarding claim 11, Castelli teaches the storage locator 734 serving as a file server to storage device 736 (Fig. 7B).

Regarding claim 13, Castelli teaches DWT as a non-linear transformation (col. 4, lines 37-41).

Regarding claim 14, Castelli teaches the multiresolution transformed signals comprise a set of multiresolution coefficients and the coefficient transformation process changes the multiresolution coefficients (col. 4, lines 37-45).

Regarding claim 15, Castelli teaches DWT as a non-linear transformation (col. 4, lines 37-41).

Regarding claim 16, Castelli teaches the coefficient suppression is applied to high frequency coefficients (Fig. 3 shows HH1, HH2,... as high frequency coefficients).

Regarding claim 17, Castelli teaches the non-linear transform comprises a gradient adjustment on high frequency coefficients (Fig. 3).

Regarding claim 18, Castelli teaches the gamma transform is applied to low frequency coefficients (Fig. 3 shows LL2 as low frequency coefficients).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H DO whose telephone number is 703-308-6720. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K MOORE can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 20, 2004.



ANH HONG DO
PRIMARY EXAMINER